

## SOME UNDESCRIBED RHOPALOCERA FROM SIAM.

BY

N. D. RILEY, F.Z.S., F.E.S. and E. J. GODFREY, B.SC., F.E.S.

With 4 Plates.

The following descriptions of Butterflies, obtained mainly since the publication of Godfrey's "Butterflies of Siam" in this Journal of 1916, are issued as a preliminary to a revised list of Siamese Butterflies which it is hoped to publish before long. The whole of the material collected up till March 1920 has been overhauled afresh, so that it is hoped that any errors which may have crept into the first list will be rectified in the next.

Most of the new forms, it will be noticed, are from the Me Song forest, N. Siam, a few from S. E. Siam, and one only from Peninsular Siam. One interesting fact has been frequently brought out in going through the collections, namely, the considerable difference between the fauna of Northern and Western Siam and that of S. E. Siam. Of the forms described below, only one (*Allotinus posidion*) of the five from Eastern and S. Eastern Siam has been met with in any form in North and West Siam so far, nor have any of those described from the Me Song forest, with the exception of *Penthema binghami mimetica*, been met with in any other part of Siam. It is hoped soon to draw up a table shewing the distribution, so far as ascertained, of the Butterflies of Siam, using the divisions adopted in the previous paper, when the very real faunistic differences of these areas will be more obvious.

All the Types of the forms here described as new, as well as the Types of those described in the previous paper have been presented to the British Museum (Natural History), together with a short series of practically every species so far obtained in Siam.

We take this opportunity of figuring the following forms already described in the previous paper in this Journal:—

GERYDUS ANCON SIAMENSIS Godfrey. (Plate V, figs. 8 and 9.)

TERINOS TERPANDER INTERMEDIA Godfrey. (Plate VII, figs. 2 and 3.)

EVERES RILEYI Godfrey. (Plate VII, figs. 4 and 5.)

HESTIA LEUCONOE SIAMENSIS Godfrey. (Plate VII, fig. 6.)

and also

THAURIA LATHYI SIAMENSIS Rothschild. (Plate VII, fig. 1.)

All the figures have been drawn from the actual Type specimens by Miss O. F. Tassart. By an unfortunate error of the printers, these have, in the process of reproduction, been reduced in size, those in Plates IV, V and VII, to approximately  $4/5$ ths., and those in Plate VI to approximately  $9/10$ ths. the natural size.

PAPILIONIDÆ

1 *Papilio laos*, sp. nov.

(Plate IV, fig. 1.)

♂. *Upperside, forewing*.—Dark shiny blue-black, immaculate, the distal half of costal area lighter, slightly greenish, the internervular and cellular rays darker, not very conspicuous. *Hindwing*.—Not so dark (except the cell and towards the base of the wing), tinged with greenish. There are pink bilunulate submarginal spots present in areas 2 and 3, extending right across these areas, in area 4, incomplete, and in area 5, almost obsolete, each densely irrorated with black scales and bordered outwardly by an indistinct quadrate dark blue-black spot reaching the margin, and inwardly surmounted by conical spots of the same colour. The cottony lining of the abdominal pocket is very pale ochreous, almost white. There are traces of pink scaling inwardly at the tips of the conical dark spots referred to, in areas 2 and 3, and at the distal end of the abdominal fold.

*Underside, both wings*.—As above, except that the *forewing* is dull blue-black not shiny, and paler than the *hindwing*, so that the internervular and cellular rays are more conspicuous; and that in the *hindwing* the pink spots are more fully developed and free of dark scaling, and consist of a submarginal series of 5 spots, i. e., in areas 2 to 6, and a discal series of four crescentic spots in areas 2 to 5, that in area 5 being minute, the others increasing in size progressively. In each series the spot in area 2 overflows into area 1c, the submarginal one only slightly, the discal one very considerably. The ground-colour of the *hindwing* is nearly uniform on the underside, the greenish tinge being confined to costa and hind-margin and the extremities of the veins.

Head clothed with red hairs tipped, except above, with black.

Thorax black except below close to the wings, where it is red. Abdomen red, spotted laterally with black, shiny blue-black above.

Length of forewing.—57 mm.

B. M. Type No. Rh. 114, ♂, Ban Na Sao, French Laos, 23. 2. 20.

This species, of which only the single male described is at present known, has the size, build and shape of *P. alcinous* Klug. It has, however, a smaller tail, it lacks the usual grey appearance, especially of the underside, of that insect, and the lining of the abdominal fold is almost white, resembling *P. plutonius* Oberthür. Also the spots, especially of the underside, of the hindwing are more numerous and much more irregular in outline.

The Type specimen was taken by a Siamese collector and, at the time the description was written at the British Museum, it was thought that Ban Na Sao, the type locality, was in Siamese territory. Subsequent enquiries have shown that this is not so—Ban Na Sao being actually in French Laos, E. of Saniabouri, about 40 miles from the Siamese frontier.

#### PIERIDÆ.

##### 2. *Delias agoranis* H. G. Smith.

*Delias agoranis*, H. G. Smith, Ann. Mag. Nat. Hist. (5), xx, p. 226 (1887).

*Piceoida agoranis*, Moore, Lep. Ind. vi, p. 182, pl. 535, figs. 2, 2a (1905).

*Delias agostina*, race *agoranis*, Bingham, Fauna Br. Ind. Butt. ii, p. 147 (1907).

*Delias singhapura agoranis*, Fruhstorfer, in Seitz Macro-lep., ix, p. 124 (1910).

As the above references indicate, this species has been somewhat unfortunate in its treatment by recent authors. We consider it a good species, equally distinct from both *singhapura* and *agostina*, though certainly somewhat intermediate in some respects between the two. Our specimens agree perfectly with Moore's figure which was made from the Type specimen.

*Singhapura* has the veins of the underside of the hindwing heavily marked with black; this is entirely absent in *agoranis*. *Agostina* is similarly devoid of this black veining, but then it has a

narrow, even, black marginal border to the hindwing below enclosing long narrow rectangular white marks. In *agoranis* this border is more than double the width, runs up in conical projections along the veins and encloses oval or circular white patches. In *singhapura* the enclosed spots are still larger, frequently divided in two by a narrow black line, semi-circular in shape, reaching from vein to vein and cut off squarely by the veins.

## NYMPHALIDÆ.

### SATYRINÆ.

#### 3. *Mycalesis siamica*, sp. nov.

(Plate IV, figs. 2 and 3.)

♂. *Upperside, forewing*.—Dark brown with two parallel narrow darker marginal lines, the markings of the underside (principally the lighter marginal area and the paler subapical bar) showing through. In area 1*a*, rather towards the base, is a large dull purplish shiny area, and above this, in area 1*b* close to vein 1 which curves below it, a single pencil of hair, its free end resting in a small oval patch of dark shiny scales. There is a further sex-mark in area 3 in the form of a diffuse mealy patch of dull ochreous scales, just reaching the edge of the lighter marginal area. *Hindwing*.—Slightly darker than the forewing, underside markings not showing through so conspicuously, marginal lines the same as in forewing. Darker towards costa, velvety. A dark brown pencil of hair arises near the base of cell and curves slightly towards costa, so as to lie along the nearly white oval patch of scales towards the base of area 7.

*Underside, both wings*.—Very dark velvety brown, lighter basally, margins broadly silvery grey, marginal lines as above. *Forewing*.—The marginal silver-grey band, lightest in areas 4 to 6 proximally (the subapical bar of upperside mentioned above), is broadest on the costa. Its inner edge extends in an almost even gentle curve from costa just before end of vein 12 to centre of area 4, where it is rather sharply angled and runs almost straight and parallel to the margin, to vein 2, thence inwardly slightly to vein 1, where it merges into the shiny inner-

marginal area. Enclosed in the band are ocelli in areas 2 (the largest), 3 and 4 (minute), and 5 and 6 (larger), those in 2 to 5 in line, that in 6 inward. There is an additional wavy antimarginal line, removed some 3 mm. from apex at costa, but closely approximating to the marginal lines in area 1*b*, and the area between this wavy antimarginal line and the margin has a slight ochreous tinge. *Hindwing*.—The lighter marginal band darker grey than on forewing, conforming more to the shape of the margin, darkest posteriorly, and enclosing seven ocelli, i. e., two in area 1*b*, one each in areas 2 to 6. Of these, that in area 2 is the largest, those at either end the smallest, the remainder subequal, and all are arranged in an even curve except for that in 3, which is set slightly inwards. Antemarginal band as in forewing, most widely separated from margin in areas 1*b* and 5, the area beyond tinged with ochreous.

♀. *Upperside, both wings*.—Like the male, but larger and lighter in colour, the underside markings more conspicuous above. *Forewing*.—The subapical white bar is present on upperside, diffuse, extending from costa into area 3, about 2.5 mm. broad, straight, the ocellus in area 2 present above. Margin lighter. *Hindwing*.—Margin pale ochreous, except towards anal angle.

*Underside, both wings*.—Exactly like the male but paler.

In both sexes the body, thorax and head, above and below, conform to the colouration of the base of the wings. Antennae slightly orange below towards the tip.

Length of forewing.—♂ 22 mm; ♀ 24.5 mm.

B. M. Type No. Rh. 117, ♂; 118, ♀, Me Song forest, Prae, N. Siam, April 1918.

In addition to the Types, nine males and three females were obtained in the same locality in April 1918 and three females in April 1916.

#### 4. *Ragadia critias*, sp. nov.

(Plate IV, fig. 4.)

♂. *Upperside, both wings*.—Very dark brown, almost black, basally paler, the markings of the underside showing through. *Forewing*.—A creamy white transverse oblique discal band from

area 5, where it is from 1 to 1.5 mm. wide, to inner margin just beyond middle, where it is about 2.5 mm. wide; traces of a similar much narrower antimarginal band run very indistinctly through areas 1a and 2; both bands are interrupted by the darker veins, especially anteriorly, and the outer edge of the discal band is somewhat sinuate. *Hindwing*.—The transverse band of forewing is continued across hindwing, its outer edge rather irregular, tapering towards inner margin and curving slightly towards, but not quite reaching, anal angle; this band is separated by a wide band of the ground-colour from the irregular curved antimarginal white band, from 1 to 1.5 mm. wide, which runs from apex almost to anal angle, and is widest centrally and posteriorly. A single tuft of jet-black hairs lies in an oblique pocket towards base of cell.

*Underside, both wings*.—As above. *Forewing*.—In addition, having the transverse band extending to area 7, where it becomes reduced to a point, and having two very pale grey narrower transverse bands roughly parallel to it and at regular intervals between it and the base of the wing. The swollen part of vein 12 is similarly coloured, the submarginal band is fully developed, narrow, extending from vein 1 to vein 6, and there is a similar very fine marginal line. The dark band of ground-colour separating discal and submarginal bands bears ocelli in areas 1a (double), 2 to 7 (one each), making seven in all. Of these that in area 7 is minute, while the remainder are all of much the same size, but become more and more indistinct posteriorly. The *hindwing* repeats the pattern of the forewing, the basal and sub-basal bands slightly broader than the corresponding bands of the forewing, the marginal and submarginal bands fully developed, the former threadlike at its extremities and just uniting with the ends of the submarginal band, thus enclosing a long narrow crescent of the ground-colour. The broad discal band of ground-colour interior to this bears only five ocelli, of which the two in area 1b are the smallest and are united, those in areas 2 and 6 are larger and equal in size, whilst that in area 4 is very large, simple, and extends considerably into areas 3 and 5 on either side.

♀. *Upperside, both wings*.—Paler brown than in the male,

the wings more rounded, the submarginal band of *forewing* not obscured in areas 1a and 2. *Underside*.—Pale markings somewhat more developed, the very large ocellus in area 4 of *hindwing* partially fused with that in area 2. Otherwise as in the male.

Length of forewing.—♂ 20 mm; ♀ 21 mm.

B. M. Type No. Rh. 115, ♂; 116, ♀, Nam Pat, 36 miles E. of Utaradit, N. E. Siam, Jan. 1920.

This species is separable at once from *R. crisilda* Hewitson, *R. critolaus* and *R. cristata* de Nicéville, its nearest allies, by the number of the ocelli on the underside of the hindwing. In *crisilda* there are invariably seven, those in areas 3, 4 and 5 being fused; in the other two species there are six, that in area 3 being absent, and those in areas 4 and 5 fused. In *critias* there are only five. The broad dark discal band of hindwing which bears the ocelli is much broader in *critias* than in either of de Nicéville's species, and is bordered externally by a much better defined white band than in *crisilda*.

#### MORPHINÆ.

##### 5. *Stichophthalma cambodia editha*, ssp. nov.

(Plate IV, fig. 5.)

♂ ♀. *Upperside both wings*.—Similar to *S. c. cambodia* Hewitson, but with the discal pale area rather more extensive, brighter and clearer, less sprinkled with brown scaling; the V-shaped marks in the discal series narrower, the tips not recurved, and each mark with a small conical median projection basad, making the marks more dagger-like in shape; the antemarginal smoky-brown lunules reduced in size and almost surrounded by the pale discal colouration, except towards apex of forewing. In the female of *editha* the large proximal extension of the V-spot in area 6 (typical of *cambodia*, the Type of which is a female) is partially suffused with bluish white scales, and has a white spot in the centre, whilst in the male it is absent altogether.

*Underside, both wings*.—Considerably paler than in typical *cambodia*. In the male the *forewing* has the basal half reddish grey-brown, bordered by a narrow band of white, the latter broader

towards costa; between this white band and the two red-brown ocelli (of which that in area 5 is almost obsolete) is a diffuse band of same colour as the base of the wing; beyond this the general colouration is pale buffy, the upperside markings faintly showing through, darker towards margin. In the *hindwing* the ground-colour is more uniform, the same shade as base of forewing, the transverse white band and the area immediately external to it almost completely suffused with blackish, the distal half of wing rather redder than basal half. Markings as in *cambodia*. The female differs from the typical female in being lighter, clearer and more of a chestnut-brown in general colouration, in having the transverse white band of both wings considerably broader and in the hindwing hardly at all suffused with black, and the outer area of forewing considerably lighter than that of hindwing. The ocelli in both sexes are more narrowly ringed with black than in typical *cambodia* and have an additional outer narrow ring of light grey.

Length of forewing—♂ 61 mm; ♀ 65 mm.

B. M. Type No. Rh. 119, ♂; 120, ♀, Khao Sehap, near Chantabun, S. E. Siam, March 1916.

*S. cambodia* was described by Hewitson in 1862 from the single female which is now in the British Museum, and which is still unique. Fruhstorfer in Seitz Macro-lep., ix, p. 425, suggests that it may be only a form of *S. louisa* Wood-Mason. However, the occurrence in Siam of *S. louisa siamensis*, recently described by Lord Rothschild (Nov. Zool. xxiii, p. 308, 1916), together with the above described race of *S. cambodia*, establishes beyond doubt the validity of the species.

In describing the subspecies we have had no male of typical *cambodia* for comparison, the female alone being known, but the females before us, as explained above, are so sufficiently distinct from the female Type of *cambodia* as to warrant our belief that *editha* will prove to be a good subspecies.



## NYMPHALINÆ.

6. *Penthema darlisa melema*, ssp. nov.

(Plate V, fig. 1.)

♂. Very similar to typical *darlisa*, but smaller, the white markings of forewing and the straw-coloured markings of hindwing slightly reduced in size, especially the latter. The bluish suffusion of forewing less pronounced, giving the insect a much browner appearance. The underside shows a corresponding difference.

Length of forewing.—55 mm. (the Type of *darlisa* measures 67 mm.).

B. M. Type No. Rh. 122, ♂, Me Song forest, Prae, N. Siam : April 1918.

This race should be readily recognisable by the characters given. The reduction in size of the lighter markings is particularly noticeable in the basal half of the hindwing. It was obtained in some numbers in the Me Song forest, during April 1916 and April 1918.

7. *Penthema binghami mimetica* Lathy.

(Plate V, fig. 2.)

*Penthema mimetica*, Lathy, Entomologist, xxxiii, p. 213 (1900).

*P. darlisa mimetica*, Fruhstorfer, in Seitz Macro-lep., ix, p. 464 (1912).

*P. mimetica* was described by Lathy from a single female which came from Pak Jong, Central Siam, and which is now in the Adams Coll. in the British Museum. A second female was obtained at Hup Bon, S. E. Siam, in April 1914 and since then a number of males have been taken in the Me Song forest, Prae, N. Siam.

Fruhstorfer (*l. c.*) regards *mimetica* as a form of *P. darlisa* which he treats as a species dimorphic in both sexes. An examination of the genitalia of these two forms, *P. d. melema* and *P. b. mimetica*, however, entirely contradicts this view. Though superficially alike, actually these structures are very distinct in the two forms. In each species the *uncus* terminates in a long spike directed downwards almost at right angles to the long axis of the body. Slightly proximal to this there arises a pair of spines, not very close together, and running parallel to each other and to this terminal spike, their tips directed posteriorly. In *melema* these are very

nearly equal in length to the terminal spike of the *uncus*; in *mimetica*, on the other hand, they are decidedly more delicate and only about 2/3rds the length of the terminal spike. In each species also the clasp ends in a spike-like process which in *melema*, in proportion, is quite twice the size of that in *mimetica*, and also less clearly differentiated from the broad upward-curving anteterminal part of the clasp from which it arises. This latter part as well exhibits a difference in that it is broader and stumper in *mimetica*, evenly tapering in *melema*. As a corollary to this it seems reasonable to suppose that typical *binghami* and *darlisa* are similarly distinct species; and, occurring together as they undoubtedly do, that they stand in the same relationship to each other in Burma as do *mimetica* and *melema* in Siam.

#### 8. *Cirrochroa chione*, sp. nov.

(Plate V, fig. 3.)

♂ *Upperside, forewing*.—Basal two-fifths brown, bounded by a slightly darker irregular line running from near costa, 2 mm. beyond cell-apex, to just beyond centre of vein 1, gently angled in area 2 (in another specimen the course of this line is rather more even). Costal area of same colour as base, the colour extending beyond edge of basal brown area, a darker shade across end of cell. Apex very broadly, and hind-margin (towards anal angle more narrowly) black, the inner edge of this black border curving roughly parallel to the outer edge of the basal brown area and just reaching to middle of costa. The intermediate discal area is golden-brown in the form of a wide even band cut off from the costa only by the narrow strip of apical black which reaches to middle of the costa. There are traces of an antemarginal series of darker spots in areas 1a and 2, and of a submarginal line in area 1a. *Hindwing*.—Of the same colour as the base of forewing, rather brighter towards hind-margin. There is a subquadrate white spot centrally in area 7, inwardly edged with black, from the outer edge of which runs a very fine direct irregular black line finishing at vein 1a about 5 mm. above margin. Between this and the marginal black border, which throughout is about 1.5 mm. wide, are, firstly, a series of six

small black spots, there being none in area 4, secondly, a series of seven crescentic black marks reaching from vein to vein and nearly touching each other and, thirdly, a heavy black wavy line fusing with the marginal border at each end. Abdominal area grey.

*Underside, both wings.*—Pale ochreous, the markings of the upperside represented by brown. A narrow transverse wavy line crosses cell of *forewing* obliquely to origin of vein 2, thence to inner margin, and is continued interruptedly across hindwing as far as vein 1a. A very well-defined narrow straight black line starts at origin of vein 7 of forewing and runs uninterruptedly to anal angle of hindwing, is diffusely edged outwardly with brown, more particularly on hindwing, and bordered inwardly, on hindwing only, as far as the irregular transverse discal line, with dull mother-of-pearl. The forewing has a small oval apical patch of lilac-grey.

The veins on upperside are throughout delicately black, those of forewing, and veins 5, 6 and 7 of hindwing being, in addition, edged with golden.

Length of forewing.—32 mm.

B. M. Type No. Rh. 121, ♂, Khao Seab, Chantabun, S. E. Siam, March 1916.

On the upperside the markings of *C. chione* much resemble those of *C. orissa*, but the light discal band is curved, not straight as in that species, and the basal dark area is bounded by a well-defined dark line. The markings of the hind-margin of the hindwing and of the underside are however very different, the latter more nearly resembling in arrangement those of *C. surya*, *C. aoris* and *C. malaya*.

### 9. *Neptis cartica meraca*, ssp. nov.

(Plate V, fig. 4.)

♂. Most closely resembles the subspecies *burmana* de Nicéville, in the absence of brown suffusion of its white markings. With the exception of the longitudinal streak on the forewing, which is distally slightly cloudy, these are entirely pure white. They are however much smaller than in *burmana*, being approximately the size of those in typical *carticoides* Moore. The underside colouration

is as in *burmana*, the white markings reduced as above.

B. M. Type No. Rh. 136, ♂, Me Song forest, Prae, N. Siam, April 1918.

A very distinct race. This species may always be readily separated from those to which it bears a close resemblance on the upperside, such as *N. soma* and *N. nandina*, by the absence of the sub-basal streak, coupled with the far greater width of the basal streak on the underside of the hindwing.

10. *Euthalia monina grahami*, ssp. nov.

(Plate V, figs. 5 and 6.)

♂. Separable at once from *E. m. perakana* Fruhstorfer, its nearest ally, by its larger size and the replacement of the broad distal bluish-green band of hindwing upperside by a completely bronze-green band, the anal angle alone showing some slight tinge of bluish. In *perakana* such green as is present is confined to the proximal half of this marginal band. The forewing also, especially costally, basally, along the veins and distally in areas 1a to 3 strongly bronze-green. Below, the ground-colour is a clearer brown than in *perakana*, the discal dark markings more pronounced.

♀. Dark markings of both surfaces as in *perakana* female, but not so heavy. Light markings larger, especially on hindwing, and paler.

Length of forewing.—♂ 29 mm; ♀, 35 mm.

B. M. Type No. Rh. 123, ♂; 124, ♀, Patani, Peninsular Siam.

This new race of *E. monina* is particularly interesting, not only on account of its being so very distinct, but also because it appreciably extends the known range of the species. It has not previously been recorded as occurring north of Perak, so far as we can ascertain.

The Types, and only known specimens, were obtained by Mr. W. A. Graham and by him presented to the British Museum.

RIODINIDÆ.

NEMEOBIINÆ.

11. *Laxita telesia bouletti* Fruhst.

(Plate V, fig. 7).

*Laxita bouletti*, Fruhstorfer, in Seitz Macro-lep. ix, p. 790 (1916).

Described by Fruhstorfer (*l. c.*) as a distinct species, of which he only knew the female Type in the Paris Museum. A single male specimen obtained in the Me Song forest, Prae, N. Siam, in April 1918 seems undoubtedly to be the male of this race. The specimen resembles *L. t. lycelene* de Nicéville, but differs in having the apical red of forewing above much wider, and the white patch towards inner margin nearly twice as large. Unfortunately the specimen is so damaged that it is impossible to be sure of the shape of the hindwing. The basal and sub-basal markings are wanting, as is said to be the case in the female described by Fruhstorfer, and the other black markings are much reduced throughout as compared with *lycelene*. In addition, the markings which in that form are bluish, are in *boulleti* rather greenish, the discal markings of hindwing more approximated to cell, and the marginal and submarginal bands narrower.

Whilst very distinct from typical *telesia* Hewitson, we do not consider *boulleti* worthy of more than subspecific rank, and therefore treat it as a race of *telesia*.

B. M. Type No. Rh. 137, ♂, Me Song forest, Prae, N. Siam, April 1918.

## LYCÆNIDÆ.

### GERYDINÆ.

#### 12 *Gerydus ancon siamensis* Godfrey.

(Plate V, figs. 8 and 9.)

Journ. Nat. Hist. Soc. Siam, ii, p. 134, 1916, ♂.

♀. In addition to the pronounced sexual differences in the shape of the wings etc., usual to the genus, has the pale area at the end of forewing cell developed to form an irregular diagonal transverse band, reaching from very near costa to vein 3 close to the round white spot in area 2 distally. The ground colour of both wings is a richer brown, not so grey as in the male. Below, the general tone is rich ochreous, forewing markings as above, hindwing with the short discal smoky band strongly developed.

Length of forewing.— 23 mm.

B. M. Type No. Rh. 145, ♀, Me Song forest, Prae, N. Siam, April 1916.

The male only of this was known to, and described by Godfrey (*l.c.*) from Muak Lek, E. Siam. Some 5 males and 6 females since obtained in the Me Song forest confirm the opinion then formed that this is a very distinct race of *G. ancon*.

13. *Allotinus posidion rekkia*, ssp. nov.

(Plate VI, figs 1 and 2.)

*A. horsfieldi continentalis*, Godfrey [*vsq* Fruhstorfer], Journ. Nat. Hist. Soc. Siam, ii, p. 135 (1916).

♂. Differs from *A. p. atacinus* Fruhstorfer (in Seitz Macrop. ix, p. 811, 1916) by its blacker tone and by having the sex-mark at the base of vein 4 smaller and even less clearly differentiated from the ground-colour.

♀. Hardly separable above in markings from Burmese *atacinus*, the colouration, however, is paler and more greyish. This applies equally to the underside.

Length of forewing.—♂, 16 mm; ♀, 14.5 mm.

B. M. Type No. Rh. 125, ♂, Muak Lek, E. Siam, 7. 1. 14.

B. M. Type No. Rh. 126, ♀, Pak Jong, E. Siam, 4. 1. 15.

This species was previously recorded in error by Godfrey (*l.c.*) as *A. horsfieldi continentalis* Fruhstorfer. This latter species, which so far is not known from Siam, is at once separable from *rekkia*, as in it veins 6 and 7 of forewing arise separately and directly from cell-end, whereas in *rekkia* they are stalked for some distance. *A. posidion* Fruhstorfer, closely resembles *A. horsfieldi* Moore, but throughout its range is consistently smaller.

14. *Allotinus drumila grisea*, ssp. nov.

(Plate VI, fig. 3.)

♀. *Upperside, forewing*.—White, basal third grey-brown merging distally into the white ground-colour, extending slightly into area 2, and divided in cell by a conical projection of the white ground-colour directed towards the base. Apex very broadly, inner angle less so, and hind-margin wholly black. Fringes red-brown. *Hindwing*.—Entirely suffused with grey; costal area black.

*Underside*.—As in typical *A. drumila* Moore.

B. M. Type No. Rh. 127, ♀, Me Song forest, Prae, N. Siam, April 1918.

Readily distinguished from typical *drumila* by the completely grey hindwing and the greatly increased grey-brown suffusion of base of forewing.

## LYCÆNINÆ.

15. *Talicada metana*, sp. nov.

(Plate VI, fig. 4.)

♀. *Upperside, both wings*.—Dark sooty brown, the fringes chequered black and white. *Forewing*.—Costal edge finely marked with white. *Hindwing*.—A broad orange band extends from anal angle to just short of vein 6, its inner edge slightly concave, its outer edge bounded in areas 1*b* and 1*c* by a very fine black marginal line, and in areas 2, 3 and 4 by basally contiguous triangular black marks the apices of which project into the orange.

*Underside, both wings*.—White, fringes as above. *Forewing*.—A heavy black mark crosses cell-end; beyond this, and rather more than half-way to hind-margin, there is a transverse series of six heavy black roundish spots, in areas 1*b* to 6, curving slightly so that the spot in area 2 is nearest the base, that in area 4, which is also the longest, is the furthest removed and in fact fuses with the corresponding spot in the antemarginal series. This latter series consists of a complete row of black triangular spots, their bases much fused together, their apices produced along the veins as lines which extend to the very narrowly black margin. In each of the white spots of ground-colour so enclosed there is a small black lunule close to the margin, those in areas 1*b* and 1*c* together forming an oblong mark proximal to which the enclosed white area is sprinkled with orange. *Hindwing*.—Arrangement of markings similar to that of forewing but the spots of the antemarginal series, except in areas 6 and 7, orange not black, the inner edge of the series very wavy, the enclosed spots of the marginal series increasingly larger from costa towards anal angle, but at anal angle smaller and partly orange. The black spots of the post-discal series much smaller than those of forewing, especially in areas 1*b*, 3, 4 and 5, where they are reduced

to mere dots, in places partially merged into the orange antemarginal series. In addition there is a roundish black spot near the base of area 7, touching vein 8, but only extending little more than halfway across area 7 towards anterior margin of cell.

Length of forewing.—15 mm.

B. M. Type No. Rh. 127, ♀, Me Song forest, Prae, N. Siam, April 1918.

The anteriorly jagged-edged and very much narrower orange terminal band of the hindwing above and, on the hindwing below, the absence of most of the basal and discal black markings together with the substitution of black for orange in the marginal series, readily distinguish this species from any of the forms of *T. nyseus* Guérin, with which we are acquainted.

16. *Azania urios*, sp. nov.

(Plate VI, fig. 5.)

♂. *Upperside, both wings*.—Rich shiny purple, the cilia grey-brown but whitish towards apex. *Forewing*.—Hind margin broadly dark brown, broadest at costa; the whole of the disc of the wing covered by a silky patch of modified scales. *Hindwing*.—Costal area completely, and outer margin very broadly, dark brown.

*Underside, both wings*.—Rather dark brown. *Forewing*.—Two minute black light-ringed spots just below costa, one slightly before, the other rather further beyond cell-end; a broad mark across cell-end, a discal series, interrupted at vein 3, and a smaller and fainter antemarginal series, are all composed of oblong spots slightly darker than ground-colour and edged internally and externally with light grey. In addition there is a marginal series of oval rather darker spots and a dark brown ante-ciliary line. *Hindwing*.—Similar to forewing, but the spots in the discal and antemarginal series smaller and less regularly arranged, the costal black spots much larger, the proximal one much nearer the base. In addition there is a sub-basal series of the small black spots, a larger black anal spot and a very much larger internally orange-bordered black spot in area 2, resting on the margin.

Length of forewing.—11.5 mm.



ERRATUM.

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Page 182, line 16 from bottom. *After the word* dark-brown  
*add*:—enclosing a darker spot in area 2; abdominal area  
light grey.

B. M. Type No. Rh. 129, ♂, Me Song forest, Prae, N. Siam, 17. 4. 1916.

Another specimen was obtained in the same locality on the following day, whilst a third is in the British Museum from Tilin Yaw, Upper Burma, 17. 4. 90, collected by Watson.

This species has points of resemblance to both *A. urannus* Butler, and *A. ubaldus* Cramer. From the former it can at once be separated by its very broad dark margins and the darker tone of its underside, although it agrees very closely with it in underside markings. From the latter it can as easily be distinguished, apart from the colouration of the upperside and the more rounded shape of its wings, by the absence of any trace of the basal streak on the underside of the forewing. It is also slightly larger than normal examples of the other two species mentioned.

ARHOPALINÆ.

17. *Arhopala dispar*, sp. nov.

(Plate VI, fig. 8.)

♂. *Upperside, both wings*.—Bright lilacine blue. *Forewing*.—A darker transverse mark at end of cell, the central area of wing paler, almost white in parts. *Hindwing*.—Costal area dark brown, marginal areas shaded with brown, tails dark brown, abdominal areas white.

*Underside, both wings*.—Ground-colour dark shiny brown with a faint dull purplish tinge. *Forewing*.—Areas 1a, 1b and 2 almost pure white; the three cell spots, costal spot and anterior part of transverse band all large and very dark brown, ringed or bordered with white; remaining spots also large but paler; the spots of transverse band oblong, the uppermost one reaching the costal spot (above cell-end), the next three in a regular row, very close to the third (distal) cell-spot, the two below, in areas 3 and 2, moved inwards so that the upper one touches the third cell-spot and also its extension in area 3; a large spot fills the base of area 2, and a very large irregular spot in area 1b extends from base to well beyond origin of vein 2; there is a shadowy submarginal series of spots slightly darker than the ground-colour and relieved with grey either side. *Hindwing*.—The costal basal spot, the basal row of four spots, of which the

third is oval and the fourth, and lowest, much the innermost, and the median row of three larger spots, of which the lowest is very long and lanceolate, are all very much darker brown than the ground-colour and very clearly ringed with white. The broad irregular spot at end of cell and the spots of the discal series are slightly paler. The latter is interrupted at veins 6, 4 and 2, and has the spot in area 1c V-shaped, that in area 1b very long, lanceolate, nearly reaching the lowest spot of the basal series. There is a darker rather indefinite wavy grey-edged submarginal line and a marginal series of very indefinite brown crescentic spots in areas 6 to 3, continued by a similar but black spot in area 2, a large round black spot heavily blue-scaled in area 1c and a much smaller one only slightly bluish in area 1b. A conspicuous feature is the replacement of the ground-colour in the whole of area 6 and in the adjacent distal parts of areas 5 and 7 by light greyish.

Length of forewing.—25 mm.

B. M. Type No. Rh. 130, ♂, Me Song forest, Prae, N. Siam, April 1918.

Similar to *A. camdeo* Moore, but smaller, and most readily distinguished by the purplish-brown tint of the underside, the more even colour of the darker markings, which are also in proportion larger than in *camdeo*, the very different shape of the lowest spot of the median series of the hindwing (we use the terminology of Bethune-Baker in his Revision of the Arhopalinae in the Trans. Zool. Soc. London, 1903), and the whiteness of the inner-marginal area of forewing and of area 6 of the hindwing.

Another male, which we consider to be a form of this species, was taken at the same time and place as the Type, but differs in being of a rather brighter blue above and very much lighter and less heavily marked below. The differences given above, however, serve equally well to separate it and the Type of *dispar* from *A. camdeo* Moore, with the Type of which both specimens have been compared.

### 18. *Arhopala opalina* (Moore).

(Plate VI, fig. 7.)

*Nilusera opalina*, Moore, Proc. Zool. Soc. London, 1883, p. 531, pl. 49. fig. 1.

Five males and a single female of this rare species were obtained in the Me Song forest, Prae, N. Siam, in April 1918, and as the female does not appear to have been recorded hitherto we give below a short description of it. It is a very close ally indeed of *A. camdeo* Moore.

♀. *Upperside, forewing*.—Basal third clear pale sky-blue, not tinged with lilac or purple as in the male; outer two-thirds much paler, almost white; costa, apex broadly, and hind-margin very dark brown; a conspicuous oblong black mark at end of cell, and a very distinctive subapical series of three oblong black marks, one each centrally in areas 4, 5 and 6. *Hindwing*.—Similar to the male; the outer not so much paler than the basal areas; the costa broadly, hind-margin narrowly dark brown.

*Underside, both wings*.—Similar to the male, but with the ground-colour paler and the dark markings rather darker and more conspicuous; the basal and median spots in forewing cell normal, not, as in the aberrant male Type, partially fused together.

B. M. Type No. Rh. 131, ♀, Me Song forest, Prae, N. Siam, April 1918.

### 19. *Arhopala andamanica ignara*, ssp. nov.

(Plate VI, fig. 6.)

♂. *Upperside*.—Differs only from *A. a. andamanica* Wood-Mason and de Nicéville, in having a very much narrower black margin to the forewing. *Underside*.—Ground-colour a much warmer reddish-brown, the transverse bands more conspicuous, smoky purplish; the four spots of basal row, the lower three of median row and the linear mark across end of cell, faint but visible, smoky purplish.

Length of forewing.—20 mm.

B. M. Type No. Rh. 132, ♂, Me Song Forest, Prae, N. Siam, April 1918.

A short series of this continental form of *A. andamanica* was obtained in the same locality as our Type. There are in addition in the British Museum two specimens, one from Tenasserim (Watson Coll.), the other from Toungoo (Godman & Salvin Coll.). The differences are constant for the nine specimens examined. *A. fulla*

Hewitson, a closely allied species, may be separated at once from *andamanica* by the fact that the two smoky transverse bands of forewing below are widely divergent towards the costa, whereas in *andamanica* they run parallel throughout.

THECLINÆ.

20. *Rapala rhaecus* de Nicéville.

Journ. Bombay Nat. Hist. Soc. 1895, p. 319, pl. P, fig. 47, ♂.

„ „ „ „ „ 1896, p. 182, pl. T, fig. 40, ♀.

De Nicéville (*l. c.*) very carefully describes and figures both sexes of this very distinct species, and supplements his description of the male with the remarks; “allied to *R. tara*, de Nicév. . . . . but the blue colouration of the upperside is quite different, being darker and richer in shade, less iridescent, and in the forewing of greater extent; the sexual patch is also smaller, barely extending into the submedian interspace, in *R. tara* it extends somewhat widely below the first median nervule; the ground-colour of the underside is also quite different.”

Swinhoe, however, in Lep. Ind. ix, p. 48, sinks it as a synonym of *R. sphinx* Fab., remarking that “de Nicéville’s types of *rhaecus*, which undoubtedly represent this species, came from Sumatra”. Incidentally, Swinhoe also states at the same time that the Fabrician type of *sphinx* is in the Banksian Cabinet in the British Museum. This is not the case; not only is the Type not there, there is not even a specimen of the species in the Collection in question.

Fruhstorfer in his Revision of (Eastern) Lycaenidae in the Berliner Ent. Zeit. lvi, p. 197, *et seq.* entirely omits the species.

This is all the more curious as there is no mistaking the species. There are in the British Museum four males: 2 from Sumatra, 1 from Moulmein, Tenasserim, and 1 from Bhutan (G. C. Dudgeon) and one other male has been obtained in the Me Song forest, Prae, N. Siam.

It is in the male abundantly distinct from any other species of *Rapala* with which we are acquainted, as, roughly speaking, it has the underside of *sphinx* and the upperside of *tara*. The male of *rhaecus* has a small very clearly defined sex-mark, triangular in shape, occupying the bases of areas 2 and 3; this is entirely absent

in the male of *sphinx*. This alone separates the males at once without looking any further. Unfortunately we have not yet seen the female.

### 21. *Biduanda cyara* (Hewitson).

*Myrina cyara*, Hewitson, iii, Diurnal Lep. Suppl. p. 26, pl. 3b, figs. 109, 110 (1878).

Hewitson, (*l.c.*, p.6,) describes both sexes of his *Myrina melisa*, and later (p. 26) a specimen, sex not mentioned, of his *cyara*. Of these he figures only the "female" of *melisa* and the specimen of *cyara*. An examination of his Types, in the British Museum, proves his male of *melisa* to be in fact a male, his female of *melisa* a male, and his Type of *cyara* a female.

The errors he committed have unfortunately been followed by most writers ever since, owing probably to the great rarity of the species.

From the above it is evident that Hewitson's "female" of *melisa*, being a male, cannot belong to that species. We consider it in fact to be the male of *cyara*, the undersides agree so very closely. In addition to Hewitson's Types there are in the British Museum: one male from Bhutan taken by G. C. Dudgeon and a female from the Me Song forest, N. Siam. This latter was at first thought to be the female of *melisa*, of which two males were obtained in S. E. Siam, but it agrees so very closely with Hewitson's Type of *cyara* that it seems more probable that it belongs to that species, especially as the two localities, that of *melisa* and that of *cyara*, are some 500 miles apart and separated by the central plain of Siam. The true female of *melisa*, therefore, still remains to be discovered, and the distribution of the two species is: *cyara*, N. E. India to N. Siam; *melisa*, Lower Burma to S. E. Siam.

## HESPERIIDÆ.

### HESPERIINÆ.

### 22. *Orthophætus barroni*, sp. nov.

(Plate VI, figs. 10 and 11.)

*Capila zennara*, Godfrey (*nec* Moore), Journ. Nat. Hist. Soc. Siam, ii, p. 141 (1916).

♂. *Upperside, both wings*.—Uniformly dark brown, the veins

rather darker, thickly sprinkled from base outwards, more particularly on hindwing, with long rich ochreous scales. *Forewing*.—An irregular oblong translucent white spot across distal end of cell. *Hindwing*.—Immaculate. *Underside both wings*.—Uniformly dull grey-brown with a faint purplish tinge distally in some lights; veins not more heavily marked.

Palpi, head, except laterally where it is pure white, thorax, patagia and abdomen (anteriorly) richly ochreous. The centre of thorax and posterior part of abdomen are unfortunately denuded of scales in the Type specimen. Thorax and abdomen below of same colour as the wings; breast ochreous. Antennae dark brown, paler beneath. Only the hind pair of legs remain on the Type specimen; these have two pairs of spurs and a long pencil of hairs on the tibiae, the latter arising right at the proximal end.

No costal fold, outer margin slightly concave anteriorly.

♀. *Upperside, both wings*.—Uniformly dull dark brown with a decided dull purplish suffusion especially basally; the veins darker. *Forewing*.—The translucent spot at cell-end much larger than in the male, and connected with an oblong spot above it not quite reaching costal margin, and a curved irregular band below it reaching to within 1mm. of extremity of vein 1, the whole forming a broad transverse silvery band right across the wing, most deeply indented at and above origin of vein 4. *Hindwing*.—Traces of darker internervular rays are present in areas 1c to 5; abdominal area paler. *Underside, both wings*.—As above. *Forewing*.—The purplish suffusion more pronounced beyond transverse band and the inner margin paler. *Hindwing*.—All trace of darker internervular rays is absent.

Antennae, head and palpi as in the male. Thorax and abdomen throughout dark grey-brown, except for the pale grey extremity of the latter.

Wings much fuller than in male, outer margin of forewing evenly convex.

Length of forewing.—♂, 32 mm; ♀, 34.5 mm.

Length of inner margin (base to extremity of vein 1), ♂, 20.5 mm.; ♀, 23.5 mm.

Length of outer margin (apex to extremity of vein 1), ♂, 22 mm; ♀, 21.5 mm.

B. M. Type No. Rh. 133, ♂, 28.4.14; 134, ♀, 20.4.14, Hup Bon, S. E. Siam.

This species together with *O. phaneus* Hewitson, (wrongly identified by Watson when setting up the genus) and *O. omeia* Leech, form a subsection of the genus *Orthophaetus* Watson, in which the males have no costal fold. The female bears a superficial resemblance to the females of *Casyapa corvus* Felder and *Capila zennara* MoÛre, and had in fact been previously recorded (*l. c.*) from Siam as the latter. We name the species after Mr. P. A. R. Barron, of the Borneo Company, near whose bungalow in the Sriracha forest it was obtained.

**23. *Hasora proxissima* Elwes & Edwards.**

(Plate VI, fig. 9.)

A short series of four males and one female of a species of *Hasora* taken at Nong Yai Boo, near Sriracha, S. E. Siam, in April 1914 seem inseparable from the above species described from the Philippines (Mindoro). We rely on the figure and description for this identification as we have not seen an authentic specimen to compare ours with.

Three of the males differ in having a faint pale spot on the underside of forewing in area 2 close against vein 3, a short distance from its origin. In all other respects they all agree exactly with the figure.

The female, which does not seem to have been described so far, differs from the male, apart from the normal sexual differences in the shape of the wings, &c, only in having ochreous more or less translucent marks in areas 2 and 3 of forewing. The lower of these corresponds in position to the pale mark referred to in the male and is crescentic, anteriorly truncate; the upper one is similar in shape, placed considerably beyond the other, the horns of the crescent cut off by the veins (3 and 4). The underside, apart from these markings, which are the same below, exactly resembles the male.

Length of forewing.—♀, 24 mm.



B. M. Type No. Rh. 135, ♀, Nong Yai Boo, S. E. Siam, April 1914.

This species is most readily separable from *H. vitta* Butler, (= *chabrona* Plötz) by the absence of the white subapical spot on the forewing, and the much greater width of the white transverse band of the underside of the hindwing. Butler in his figure and description of *H. vitta* makes no mention of the presence of this minute subapical spot, and consequently Elwes failed to identify the species with *chabrona*, but nevertheless his Type, which is in the British Museum, most obviously possesses it. A form of *vitta*, which may prove to be a distinct subspecies of it, also occurs in Siam but has not been obtained yet in sufficient numbers to enable us to judge whether the slight differences from typical *vitta* exhibited are constant or not.

EXPLANATION OF PLATE IV.

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- Fig. 1. *Papilio luos*, sp. nov., ♂.  
2. *Mycalesis siamica*, sp. nov., ♂.  
3.       "       "                       ♀.  
4. *Ragadia critias*, sp. nov., ♂.  
5. *Stichophthalma cambodia editha*, ssp. nov., ♂.

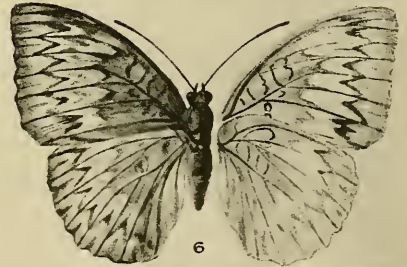
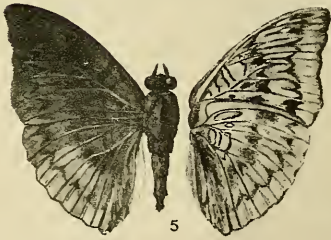
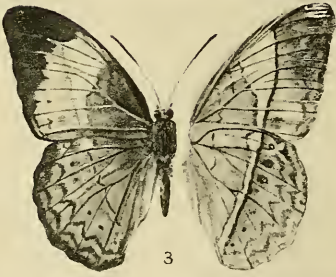
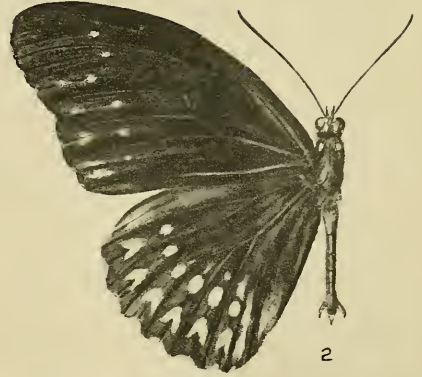


RHOPALOCERA FROM SIAM.

EXPLANATION OF PLATE V.

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- Fig. 1. *PentHEMA darlisa melema*, ssp. nov., ♂.  
2. „ *binghami mimetica*, ssp. nov., ♂.  
3. *Cirrochroa chione*, sp. nov., ♂.  
4. *Neptis cartica meraca*, ssp. nov., ♂.  
5. *Euthalia monina grahami*, ssp. nov., ♂.  
6. „ „ „ „ ♀.  
7. *Laxita telesia bouletti* Fruhst., ♂.  
8. *Gerydus ancon siamensis* Godfrey, ♂.  
9. „ „ „ „ ♀.

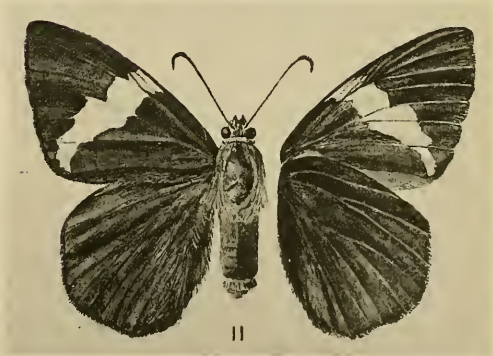
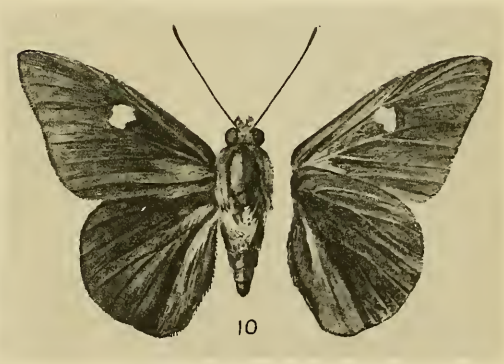


RHOPALOCERA FROM SIAM.

EXPLANATION OF PLATE VI.

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- Fig. 1. *Allotinus posidion rekkia*, ssp. nov., ♂.  
2.     "                 "                 "                 ♀.  
3.     "                 *drumila grisca*, ssp. nov., ♀.  
4. *Talicauda metana*, sp. nov., ♀.  
5. *Azanus urios*, sp. nov., ♂.  
6. *Arhopala andamanica ignara*, ssp. nov., ♂.  
7.     "                 *opalina* Moore, ♀.  
8.     "                 *dispar*, sp. nov., ♂.  
9. *Hasora proxissima* Elwes & Edwards., ♀.  
10. *Orthophaectus barroni*, sp. nov., ♂.  
11.     "                 "                 "                 ♀.



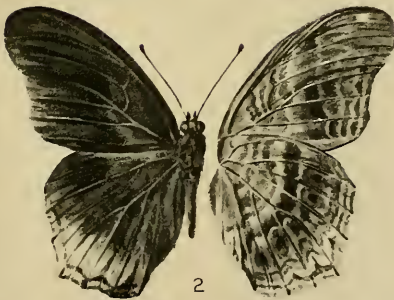
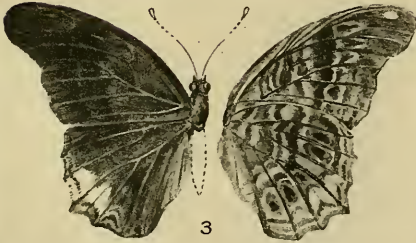
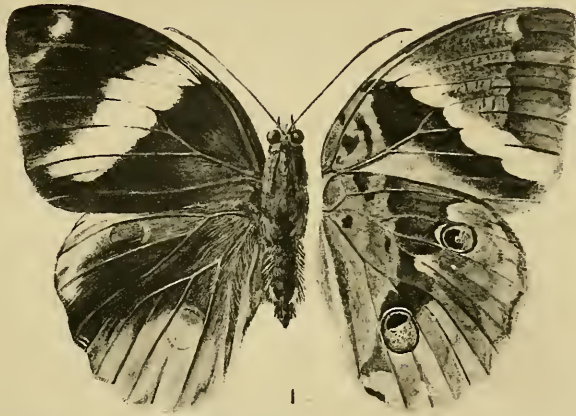
RHOPALOCERA FROM SIAM.

EXPLANATION OF PLATE VII.

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- Fig. 1. *Thauria lathyi siamensis* Rothschild, ♂.  
2. *Terinos terpander intermedia* Godfrey, ♂.  
3.     "           "           "           "           ♀.  
4. *Everes rileyi* Godfrey, ♂.  
5.     "           "           "           ♀.  
6. *Hestia leuconoe siamensis* Godfrey, ♂.





RHOPALOCERA FROM SIAM.